

Clean Energy and Carbon: The Perspective of Big Generators and Retail Marketers

Liz Salerno, Policy Analyst
American Wind Energy Association

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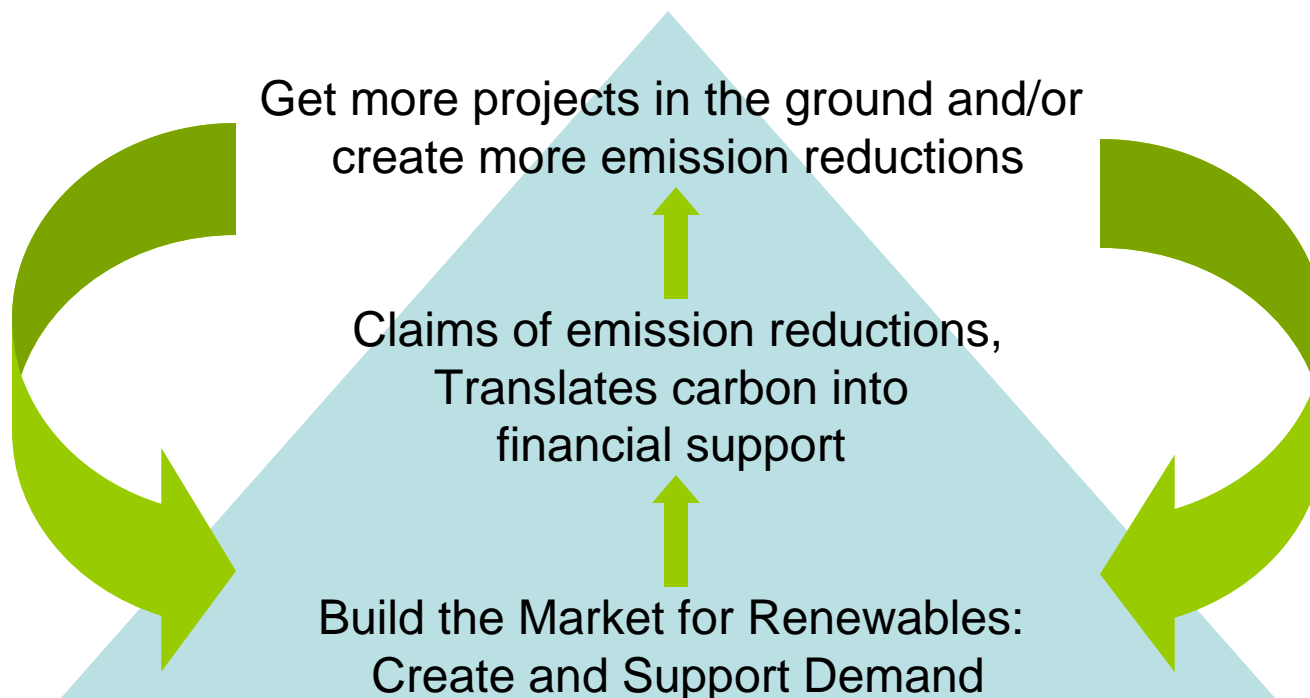
Outline

- Value of carbon markets for the generator
- Overview of Federal carbon regulations
- Carbon regulation structure and impact on renewable marketing
- AWEA's current efforts and perspective
- Next Steps

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What's the value of carbon markets for the Generator?



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Ensure valid emission claims: Why?

- With proper structure (allowance allocation), a carbon regulation could help solidify the REC or offset market for surplus reductions by
 - quantifying and delivering concrete reductions to the consumer and
 - creating a direct market price for carbon
- However, the value of valid claims expands beyond the REC markets: The cost-benefit tradeoff for renewables isn't always perceived the same way
 - Carbon benefit is necessary claim in overcoming hurdles for development of projects, ex. combating NIMBYism

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Ensure carbon is translated into financial value: Why?

- To maximize value of carbon market to renewable, the full market price of reducing 1 ton of CO₂ should flow down to project development and financing to drive market expansion
- If the value of carbon can't be monetized in the early stages of project development, it limits the ability of the carbon market to drive the renewable market

Currently: RECs are being valued in some power purchase agreements



Ensure carbon is translated into financial value

Value of zero-emitting generation under carbon regulations shows up in 2 potential areas:

- In wholesale or regulated electric price due to increased costs for emitting generators
- In direct recognition of carbon displacement through allocation or other policy provisions



Ensure carbon is translated into financial value

Future:

If no allowance allocation, carbon value is lost or diluted because no carbon-valued commodity.

If renewables get an allocation, there are multiple ways to monetize that value in the market to make project financially viable.

- Combining allowance with REC product for end consumer.
- Options outside the REC market also exist

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Federal Carbon Regulations

What's coming down the barrel?

- Several House and Senate bills proposed and will be reintroduced next session, but regulations still a few years out
- Structure and rules of the regulation are being written right now!
- Ensuring renewables can make claims and get value for their carbon reductions are NOT at the top of legislators' TO DO list for carbon regulations
- Widespread assumption that renewable automatically benefit from a carbon regulation so no need for special treatment.

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Structure of carbon regulations and renewable marketing

- Value of carbon
- Use and Eligibility of Offsets
- Allowance Allocation

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Market Value of Carbon

- The value of carbon will be limited in the regulation through some economic relief mechanism
 - Safety valve (\$7/ton of CO₂), “circuit breaker”, linked to cost of technology
- Therefore the value that renewables provide as a carbon reduction mechanism will also be limited.
- The value of surplus carbon reductions or offsets will shadow value of regulated market regardless of “true” carbon value



Carbon Offsets

- The use and eligibility of offsets is being determined in regulations
- Ranges from strictly limited to unlimited
- An economy-wide carbon cap will limit where offsets can be created
 - Renewables within a regulated electric sector could mean they are not eligible as an offset, but viewed as a direct compliance mechanism.



Allowance Allocation

- Who controls the allowances means everything in terms of carbon claims: No access to allowances, no ability to make surplus emission reduction claims
- Renewables are the minority player in the allocation game, conventional generators will not give up allowances without a fight
- Several options exist to address our needs, such as output-based allocation, set-asides and other direct allocation approaches, but what is being proposed and likely to move forward is a different story

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Allowance Allocation: Want versus Reality

- Renewables ARE NOT explicitly allocated allowances in any of the bills

What's on the table? Focus on minimizing economic impact

- Compensating allocation, “make fossil generators whole”
- Auction allowances and use revenue for ???
- Allocation based on: historical emissions, heat input, and output



AWEA's View & Approach

- Wind/Renewables displace carbon emission on the grid regardless if the carbon is ultimately avoided (due to cap and trade mechanics) and there is a real value in that displacement
 - Value in helping meet the overall cap cost effectively, or value in reducing carbon emissions below the cap to meet consumer demand for reductions
 - Renewables should be recognized for the value wherever it is provided
- Therefore, we support carbon regulation design that:
 - Allows maximum flexibility to participate in multiple markets for renewables (RPS, Emission markets, voluntary and offset markets, etc)
 - Different markets have different needs which should be accommodated without undermining other markets

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AWEA's Current Efforts

Clean Air Subcommittee: “work to achieve a robust and liquid market for RECs and emission allowances that fully recognize the benefits of wind in order to maximize the potential value to drive development ”

- Pursuing analysis to determine how different carbon regulation designs impact renewable development and develop policy position
- Active in RGGI and CAIR regulations to:
 - Ensure renewables get recognized for their value as a zero-emitting energy source
 - But also to set a precedent for future Federal regulations

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What Now?

- Opportunity for renewable and broader clean energy community to discuss position on regulation
- Renewables and clean energy are the available and deployable solution to climate change
 - Use this as leverage to ensure results in regulation that support the renewable market
- However, as the broad renewable community, the burden is on us to make the case for including renewables in Federal regulations.

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Thank You!

Contact:

Liz Salerno, Policy Analyst

American Wind Energy Association

esalerno@awea.org

202-383-2517

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